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ANALYSIS OF URBAN CONSTRUCTION: CONCRETE AND REINFORCED CONCRETE STRUCTURES

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Currently in Ukraine a significant number of buildings and structures are erected using composite assembly units of concrete and reinforced concrete. They are prefabricated and monolithic concrete structures, complex structures made of different concrete types, walls of concrete blocks, monolithic buildings with long-term interruption in concreting of different parts, constructions concreted in the process of reconstruction or rebuilding of damaged structures. Typically, these designs have different structural and strength characteristics associated with the hardening process based on conditions of technological processes and technical characteristics of architectural and design solutions.

To ensure the operational reliability of buildings and structures, which depends on the joints' strength, the solidity of the joints, cracking resistance of composite structures, their stiffness and stability of individual structural elements and the entire structure, the degree of tightness of the joints of all structures and contacts between them should have a close strength reserve. Therefore, considerable attention in projecting and construction is paid to improving design solutions of joints and technologies for their implementation. With the advent of high strength synthetic materials and, in particular, acrylic adhesives a possibility appeared of these materials application in load-bearing structures. It should be noted that in some cases, the use of acrylic adhesives to enhance or restore the bearing capacity of concrete or reinforced concrete structures is the only possible way.

The methods of connecting concrete elements with acrylic adhesives were used during the reconstruction of the foundation for the largest unit at "Kharkov Electromechanical plant". Besides, the above-mentioned method were used to repair and rebuilt foundations at "Kharkov tractor plant of motor vehicle chassis".

Thus, as a result of the pilot study and pilot implementation it can be concluded that adhesive bonding of concrete acrylic adhesives are more effective than compound adhesives based on other polymers used for these purposes at the present time. Acrylic adhesives are simple and reliable in preparation, low compound. Concrete bonding technology is simple and reliable. The operations for performing special types of work can be motorized.